

## Our Products



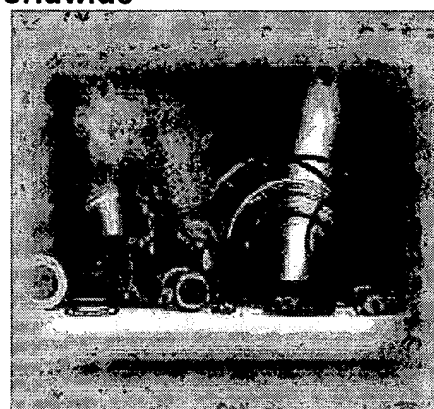
### Flexible Graphite

Over 30 years of continuous growth serving customers worldwide

In the 1970s, Graftech Inc. invented GRAFOIL®



Flexible Graphite sheet and developed it as a replacement for asbestos in high temperature gasket applications. In the 1980s, we introduced this product to the automotive industry. We didn't stop there.



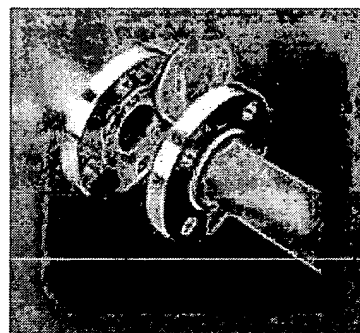
In the 1990s, we began creating natural graphite-based products and solutions for

applications in fuel cells and electronics.

### Applications

#### Internal Combustion

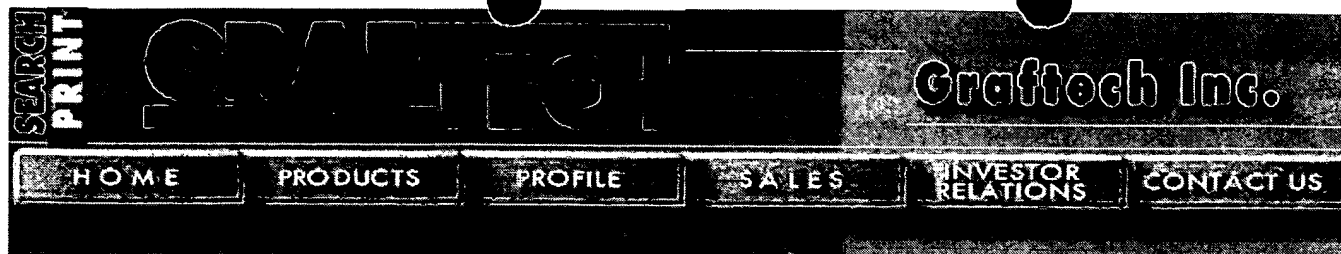
#### Fluid Sealing



### Some Frequently Asked Questions

#### What is Flexible Graphite?

Contact us for your specific application and requirement.



## What is Flexible Graphite?

### Frequently Asked Questions

The unique properties of GRAFOIL® brand products begin with natural graphite flakes found in major deposits in China, Madagascar, Canada, Brazil, and Russia. Only high quality raw graphite flake is used in GRAFOIL production.

### Facts and F.A.Q.'s

#### What is GRAFOIL Flexible Graphite?

GRAFOIL® Flexible Graphite is a distinctive material with essential characteristics of graphite but with complementary properties different from conventional manufactured carbons or graphite such as those used in mechanical seals. When flexibility, compactibility, conformability, and resilience are added to graphite's basic properties, you have the characteristics of "flexible graphite." You also have a superior high-performance packing and gasketing material.

#### How is GRAFOIL Flexible Graphite manufactured?

Graftech Inc. manufactures GRAFOIL Flexible Graphite as a rolled sheet product by taking a high quality particulate graphite flake and processing it through an intercalation process using strong mineral acids. The flake is then heated to volatilize the acids and expand the flake to many times its original size. The expansion process produces a wormlike, dendritic-like structure that can be readily formed by molding or calendaring into sheets. No binders are introduced in the manufacturing process. The result is a sheet product that exhibits excellent tensile strength and, for industrial applications, typically exceeds 98% elemental carbon by weight.

#### What are some typical characteristics of this material?

GRAFOIL Flexible Graphite is flexible, compressible, resilient, chemically inert, fire safe, and stable under load and temperature. It is also anisotropic due to its crystalline structure and has excellent directional, electrical and thermal conduction properties. GRAFOIL Flexible Graphite has found applications in chemical gasketing, high temperature automotive gasketing, heat shielding, and noise damping components. It is also effective in electronics applications involving RFI and EMI shielding, as well

**as heat sink applications.**

**Is the source of the raw natural graphite flake an important factor?**

**The origin of the raw incoming flake is very important. Graftech Inc. sets rigid standards and is very selective in the qualification of available world flake sources in order to eliminate undesirable and harmful elemental contaminants in Graftech's finished products.**

**Does Graftech acid treat its flake or is it purchased from someone else?**

**To assure the highest possible control and quality in this critical process step, Graftech Inc. has processed its own flake, since we invented flexible graphite over 30 years ago. We also believe processing flake ourselves in our highly automated process, rather than purchasing this service, allows us to manage costs more effectively. We are continually improving our process so that today it is a world-class, state-of-the-art flake processing facility.**

**What thicknesses and sizes are available?**

**GRAFOIL Flexible Graphite is available starting with our patented ultra-thin .003" thick GT™ Y Grade, or standard materials from .005" up to .060" thick, in standard increments of .005". Our standard production line widths are 24" and 39.4". Material can also be supplied in custom slit widths or cut sheets. We can also laminate sheets, to form virtually any thickness desired.**

**What densities are available?**

**Standard density for GRAFOIL Flexible Graphite is 70 lbs/ft<sup>3</sup> (1.12 g/cc). However, depending on thickness and order size, densities can be manufactured from below 50 lbs/ft<sup>3</sup> up to 90 lbs/ft<sup>3</sup>.**

**Can GRAFOIL Flexible Graphite be combined with other materials?**

**Yes. GRAFOIL Laminated Flexible Graphite is available in several styles with metallic or non-metallic interlayers (for additional strength), adhesive facings, and other configurations. For appropriate volumes, we can even help design a laminate for your specific needs.**

**What grades are available for sheet, laminates, or other GRAFOIL Brand Products? Several grades are available depending on your particular application. For further assistance, contact our Sales Office. They will be glad to explain our product offerings and help you select a grade, or you may request that a technical field sales person contact you.**

**Where is GRAFOIL Flexible Graphite sheet manufactured and how can you be assured you are getting genuine GRAFOIL Flexible Graphite?**

**All GRAFOIL Flexible Graphite products are manufactured by**

**Graftech. We have multiple state-of-the-art production lines, giving us the flexibility to produce material to exacting specifications with the dependability, consistency and on-time delivery our customers demand. When you need flexible graphite, always specify GRAFOIL Flexible Graphite from Graftech Inc.**